PATENT ABSTRACTS OF JAPAN

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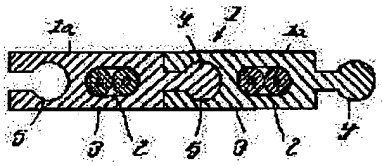
(54) FLAT WIRING CABLE

(57)Abstract:
PURPOSE: To provide a flat wiring cable easily applicable in practical field allowing process of bent laying at the site easily with a practical radius of bending.
CONSTITUTION: A strip-form male fit part 4 and a strip-form female fit part 5 are formed on a left and a right external sides in a single body continuously in the longitudinal direction (constituting a unit cable 1a) in such an arrangement that, when two unit cables 1a, 1a are laid in line, the male/female fit part 4, 5 of one unit cable 1a can be detained with the female/male fit part 5, 4 of the other unitary cable 1a with capability of being separated as desired. When laying is made laterally, the cables are disengaged at the bend, and they are slided relative to each other and bent while a gap 6 is reserved between them adjoining.



LEGAL STATUS

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[Date of extinction of right]	

* NOTICES *

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the distribution cable used for distribution cables, such as a telephone in an office etc., or connection between computer application devices, especially the Taira form distribution cable used as an object for undershirt carpets.
[0002]
[Description of the Prior Art] In recent years, it is in the inclination for a personal computer application device to permeate the business of an office, a lab, works, etc. widely, with high-performance-izing of a personal computer, and low-pricing. Although that capacity was restricted by the amount of the data which each holds since it designed as a premise that this kind of device is conventionally used independently, respectively, there is an inclination to aim at a deployment of the data which each device holds, by the so-called LAN (Local Area Network) system, i.e., the system which connected each device of each other.
[0003] As one of the construction approaches of the cable used for connection of such an application, a cable is manufactured to cross-section Taira type, and laying under carpets, such as an office, is performed.
[0004] Although the need of bending the distribution cable of this Taira type to the predetermined sense suitably comes out on the occasion of construction, the following approaches are used conventionally.
[0005] (a) As shown in drawing 6 , carry out vertical reversal, and pile up and bend the Taira form distribution cable 1.
[0006] (b) As shown in drawing 7 , by part for a bend section, take big bend radii and bend the Taira form distribution cable 1 gently.
[0007] It becomes difficult to reverse the approach of (a), if the thickness of a cable is set to about 2mm or more, and the reversed place has the fault that thickness becomes two times.
[0008] Moreover, since an optical fiber breaks when **** for signal transmissions in a cable 1 is a fiber-optic cable, this approach cannot be used.
[0009] If the number of **** for signal transmissions in a cable 1 increases by the approach of (b), since the width of face of a cable 1 becomes large inevitably, bend radii become extremely large and are not practical.
[0010] Although the solution approach of this problem is proposed by JP,2-20736,Y and JP,2-34731,Y, both of the approaches are insufficient.
[0011] That is, as shown in drawing 8 , the former approach (JP,2-20736,Y) is deeply cut to a distribution cable 1, prepares 10, inserts the fixed form piece 11 in this cut 10, and forms the bending section.
[0012] However, by this approach, the bend radii of the inside [bend radii / of a lateral part A] section B are small. Therefore, when it is going to make the bend radii of a lateral part A small, since the inside section B needs bend radii smaller than it, as a result, a lateral part A does not serve as sufficiently small bend radii, but it is deficient in it to practicality.
[0013] Moreover, as shown in drawing 9 , the latter approach (JP,2-34731,Y) forms the connection section 12 in the cable 1 center, removes the part of the bending section of this connection section 12, and forms a slit 13.
[0014] It has the intention of absorbing distortion by the difference of the bend radii of the lateral part A of a cable 1, and the inside section B by this slit 13.
[0015] However, by forming this connection section 12 (slit 13) in fact, the width of face of a cable 1 will become still larger, and distortion by the difference of the bend radii of a lateral part A and the inside section B will become large, and it will not be able to absorb, but the effectiveness which formed the slit 13 as a result will be lost.
[0016] It is a technical technical problem to offer the Taira form distribution cable which exceeded in the practicality which this invention solves such a trouble and can carry out bending construction easily in practical bend radii.
[0017]
[Means for Solving the Problem] The summary of this invention is explained with reference to an accompanying drawing.
[0018] In the distribution cable which formed the enveloping layer 3 in the periphery with resin, and was formed in cross-section Taira type although two or more **** 2 for signal transmissions or **** 2 for signal transmissions were installed Male fitting **** 4 and female fitting **** 5 to which one side fits into another side are formed in the right-and-left external surface of said enveloping layer 3 at a longitudinal direction (setting this to unit cable 1a). So that engaging and releasing of female fitting **** 5 or male fitting **** 4 of unit cable 1a of another side may be attained at one male fitting **** 4 or female fitting **** 5 of unit cable 1a, when distribution cable (unit cable) of two bodies 1a and 1a are made to install The Taira form distribution cable characterized by constituting is started.

[0019]
[Function] Two or more unit cable 1a is installed, and it fits in, and female fitting **** 5 or male fitting **** 4 of unit cable 1a of another side (each other is adjoined) which counters one enveloping layer 3 side external surface of adjacent unit cable 1a with **** pan ****** fitting **** 4 or female fitting **** 5, and this is made into two or more one, and is laid.
[0020] In case bending construction is carried out in the direction of a side face, in the bending section, said fitting of a unit cable 1a comrade is solved, a clearance 6 is formed among adjacent unit cable 1a, suitably, a slide is carried out and a unit cable 1a comrade is each-other bent.
[0021] That is, though it is a cable broad as the whole, bending construction can be carried out with the bend radii at the time only of said unit cable 1a.
[0022] In addition, if unnecessary male fitting **** 4 and female fitting **** 5 are cut off in the bending section, it can lay with still smaller bend radii.
[0023]
[Example] This example really forms [at 1 side] male fitting **** 4 in one enveloping layer 3 side face of distribution cable 1a which covered **** 2 for signal transmissions with resin, and was formed in cross-section Taira type as shown in drawing 1 continuously a longitudinal direction. In the side face of the opposite side, said male fitting **** 4 and female fitting **** 5 of the configuration which fits in are really similarly formed in a longitudinal direction continuously, this one distribution cable 1a is made into one unit, and the width of face of this unit cable 1a is designed sufficiently small, and it forms so that bending construction can be carried out easily.
[0024] It lays as one, making male fitting **** 4 and female fitting **** 5 counter, carrying out required-number juxtaposition of this unit cable 1a, and carrying out fitting of male fitting **** 4 and female fitting **** 5 of unit cable 1a and 1a which adjoin each other as shown in drawing 2 .
[0025] And it is made to break away without carrying out fitting of the 4-fitting **** 5 comrade, as a bending construction part is shown in drawing 3 , a clearance 6 is formed, and a fitting part is made to slide suitably, and is made and laid.
[0026] Drawing 5 is the distribution cable 1 created for the comparison. This distribution cable 1 covers polyethylene foam to the nakedness annealed copper wire of the diameter of 0.65mm, arranges in 2 juxtaposition the insulated wire made into the outer diameter of 1.8mm, carries out package shielding on the lamination tape of aluminum and polyester, and forms **** 2 for signal transmissions.
[0027] An enveloping layer 3 is formed so that it may become a cross-section configuration (thickness of 2.6mm, width of face of 16mm) by Elasticity PVC about the periphery of this **** 2 for signal transmissions.
[0028] When bending construction was tried by this cable 1, 2m of the minimum bending radius was a limit.
[0029] On the other hand, **** 2 for signal transmissions which drawing 1 shows the example of above-mentioned this invention, and was used is the thing of the same structure as the distribution cable 1 for a comparison shown in said drawing 5 .
[0030] The enveloping layer 3 was formed by Elasticity PVC so that it might become the cross-section configuration (thickness of 2.6mm, width of face of 8mm) where this signal-transmission **** 2 was illustrated, and this was set to unit cable 1a. That is, it is 1/2 piece of the distribution cable 1 for a comparison.
[0031] This unit cable 1a can carry out bending construction in bend radii of 10cm.
[0032] When fitting of these one a2 unit cables was carried out by fitting **** 4-5 which adjoins as mentioned above, though it was almost the same as the distribution cable 1 for a comparison, bend radii were able to reduce the overall configuration (width of face) of a cable 1 to 10cm from 2m. In addition, drawing 3 is illustrating the case where do in this way, and fit in and bending construction of the three unit cable 1a is carried out, and drawing 4 is example Fig. of another.
[0033] In addition, as **** 2 for signal transmissions, the following can be considered besides this example.
[0034] (a) unit cable 1a of the class from which the (thing d) coaxial cable (e) fiber-optic cable distribution cable 1 which shielded by twisting two thing (c) insulated wire which twisted two insulated-wire (b) insulated wire which performed pre-insulation to the conductor differs -- you may combine -- unit cable 1a -- ******** -- it may be formed from the combination of **** 2 for signal transmissions of a class.
[0035] Moreover, the fitting-like section 4-5 can design the configuration suitably that the configuration should just be unified in each unit cable 1a comrade.
[0036]
[Effect of the Invention] Since it constituted as mentioned above, this invention can carry out bending construction easily in practical bend radii, and since branching and association of a unit cable comrade are easy, it can offer the distribution cable of the Taira form which exceeded in the practicality which can respond also to layout modification flexibly, especially the cable for undershirt carpets.

[Translation done.]

* NOTICES *

CLAIMS

[Claim(s)]
[Claim 1] In the distribution cable which formed the enveloping layer in the periphery with resin, and was formed in cross-section Taira type although two or more **** for signal transmissions or **** for signal transmissions were installed Male fitting **** and female fitting **** to which one side fits into another side are really formed in the right-and-left external surface of said enveloping layer at a longitudinal direction. The distribution cable characterized by constituting so that engaging and releasing of female fitting **** or male fitting **** of a distribution cable of another side may be attained at one male fitting **** or female fitting **** of a distribution cable, when the distribution cable of two bodies is made to install.

[Translation done.]

* NOTICES *

TECHNICAL FIELD

[Industrial Application] This invention relates to the distribution cable used for distribution cables, such as a telephone in an office etc., or connection between computer application devices, especially the Taira form distribution cable used as an object for undershirt carpets.

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EFFECT OF THE INVENTION

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TECHNICAL PROBLEM

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[0035] Moreover, the fitting-like section 4-5 can design the configuration suitably that the configuration should just be unified in each unit cable 1a comrade.

[Translation done.]

* NOTICES *

DESCRIPTION OF DRAWINGS

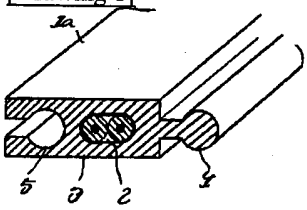
[Brief Description of the Drawings]
[Drawing 1] It is the sectional view of the unit cable of this example.
[Drawing 2] It is in the fitting condition of the unit cable of this invention, i.e., the sectional view of a distribution cable.
[Drawing 3] It is the top view of the bending part of the distribution cable of 3 one in which the bending construction approach of this example is shown.
[Drawing 4] It is the sectional view of the unit cable of example of another of this example.
[Drawing 5] It is the sectional view of the distribution cable for the comparison with this example.
[Drawing 6] It is the example of bending construction which is not suitable for the former.
[Drawing 7] It is example of another of the example of bending construction which is not suitable for the former.
[Drawing 8] It is an example of bending construction by JP,2-20736,Y.
[Drawing 9] It is an example of bending construction by JP,2-34731,Y.
[Description of Notations]
1a Distribution cable (unit cable)
2 **** for Signal Transmissions
3 Enveloping Layer
4 Male Fitting ****
5 Female Fitting ****

[Translation done.]

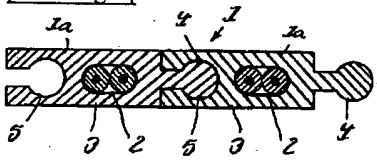
* NOTICES *

DRAWINGS

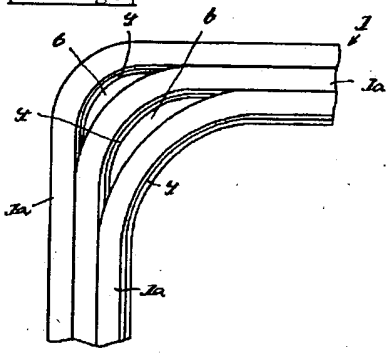
[Drawing 1]



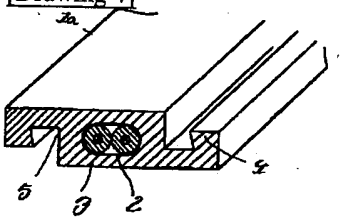
[Drawing 2]



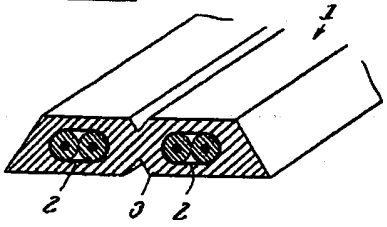
[Drawing 3]



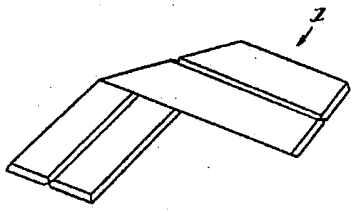
[Drawing 4]



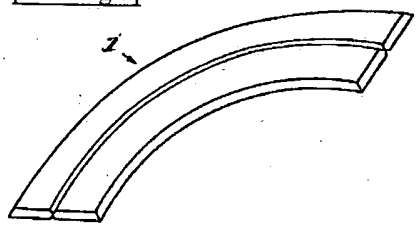
[Drawing 5]



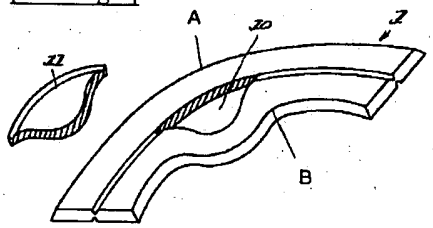
[Drawing 6]



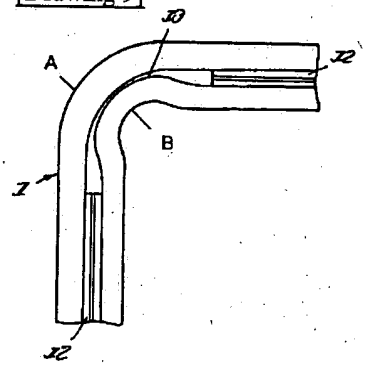
[Drawing 7]



[Drawing 8]



[Drawing 9]



[Translation done.]